

Entangled Landscapes

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Preface

In 2018 I attended a residency on Coast Salish territories of the Lekwungen, Snaw-Naw-As (Nanoose), Scia-new (Cheanuh), T'Sou-ke, Malahat, W̱SÁNEĆ, S əwaθn Məsteyəx^w (Tsawwassen), and the Hul'qumi'num Mustimuhw (Hul'qumi'num speaking people) including Stz'uminus (Chemainus), Cowichan, Halalt, Lake Cowichan, Lyackson, and Penelakut nations, and known by settlers as Mayne Island, BC, Canada. Indigenous peoples have been fishing by the Island as long ago as 3000 BC. It was a gathering place and resting place for many territories as it was a mid-way point between Vancouver Island, the home of the Kwakwaka'wakw (also known as the Kwakiutl), Nuu-chah-nulth, and Coast Salish peoples and the mainland. The island's colonial history dates back to the 18th century. John Aitken, a two-spirited elder raised on the island was invited to share some of these stories. He spoke about the importance of land acknowledgements and their significance to Indigenous peoples to work towards decolonising the land.

My interest in place comes from my personal diasporic history: I am an immigrant and settler to Canada. I was born in a refugee camp in Hong Kong to Vietnamese parents that fled the communist country by boat. This past year was my first time living in Europe and I was anxious about living here and confronting the weight of colonial history. In physics, the principle of locality states that objects are directly “influenced by their immediate environment” or surroundings (Plotnitsky, 2016). I have a longing to empathise and create a connection with places I encounter.

Introduction

This thesis is an investigation into the complicated relationship between botany and colonialism; specifically, the Dutch Empire's history and repercussions occurring present day. What will I discover if I search for the affects of colonisation in the land of the colonisers? What do these effects look like? How have these effects manifested? These questions are taken into consideration in my own practice and I reflect on these topics throughout the thesis.

Alongside their commercial exploitations European empires brought scientists on their voyages to pursue scientific knowledge for technical innovations and with the application of that knowledge they created their economic advancements (Brockway, 1979). European botanist and naturalist came to study the Americas, Africa, Asia, and the Pacific Islands which they termed the *New Worlds* and collected thousands of flora specimens from these continents.

Plants were often categorised in four groups: edible, medicinal, economical, and beauty, which ultimately meant for ornamental usage. These plants deemed *exotic* were brought over from distant continents and cultures back to the European market. Empires were built upon trade however "imperial transplantation was a two-way process" (Casid, 2005) and plants were introduced on both sides for agricultural exploits. Cash crops such as sugar cane, tobacco, coffee, and indigo were shipped over from one part of an empire to another to cultivate in colony plantations. Botanists experimented to produce higher yields in the array of climates and terrains for capital gain.

How have *exotic* trees and flowers survived or thrived post-transplantation? What became of these plants? In many cases these *exotic* floras have become entangled in their adopted soil. As a result, some have spread steadily over the centuries impacting ecosystems and eventually in an ironic

juxtaposition become invasive plant species, the invaders in this landscape.

The First Chapter introduces how science, namely the study of flora effected mass movements of plants though the introduction and cultivation of non-native plant species in the Netherlands.

In the Second Chapter, entanglement is further explored through examinations of terms. What is an 'alien' and what is considered 'alien'? What is 'non-native'? In the ruins of empire and through globalisation, can we say that most things are now 'non-native'? What is 'invasive' and how does invasion progress?

The Third Chapter incorporates the research I conducted for my graduation project and documents my material experimentation process, utilising the plants as both subject and form. It reports on my methodology, integrates multiple narratives, and explores recurring themes in my work such as the notion of landscape and the representation of nature, place and displacement.

CHAPTER 1

Botany and Colonialism

The empire on which the sun never sets. I am reminded of the first time I came across the term ‘the sun never sets on the British empire’ and my dismay of its scale – almost incomprehensible. As a high school student, I was taught the history of England and Europe before Canadian history; to then come to the realisation that the lands and territories that are now called Canada were colonised by the British empire and a part of its *eternal engine*. Although this hyperbole often refers to the Spanish or British empires while generally not applicable to the Dutch; at one point in history it nearly could.

During the period previously referred to as ‘Dutch Golden Age’¹ spanning roughly from 1580 to 1670, Dutch culture and political influence soared across the globe. For the relatively small size of the Netherlands, in terms of geography and population, the country spread far and wide (Poddar, Patke and Jensen, 2008). The Dutch colonised parts of three continents: the Americas, Asia, and Africa.

1.1 Empire Expansion

In 1512, three Portuguese ships on the quest to find the source of nutmeg and cloves arrived on the Maluku Islands which began the multi-centuries’ long occupation of the east. The introduction of these spices to the occident was through the Silk Road, a network of trade routes dating back to the 2nd century. In the late 16th century, the Dutch came to the regions known today as Indonesia just like the Portuguese and Spanish before them, driven by their desire to control the spice trade. This control was economically lucrative as

¹ “Gouden Eeuw” is a contested historical term to describe the Dutch Republic in 17th century. In 2019 the Amsterdam Museum removed the term from their collections. Available at: https://www.amsterdammuseum.nl/nieuws/gouden_eeuw.

the spices were a form of global currency (Spencer and Cross, 2017). European empires – the English, Dutch, French, Portuguese, and Spanish rivalled over control of trade markets. The Dutch and Portuguese Wars, also known as the Spice Wars, spanned from 1602 to 1663. Caught in the middle of these wars were the indigenous peoples of the Maluku Islands and Java.

The Dutch became the dominant force through the formation of the Dutch East India Company or *Verenigde Oost-Indische Compagnie* (VOC) in Dutch, founded in 1602. The company formed its colonial headquarters in Batavia, now Jakarta. Under the command of the Governor General, Jan Pieterzoon Coen², the VOC eliminated rivals and took control of the entire spice supply chain, from production, shipment, and to auction in Amsterdam (Poddar, Patke and Jensen, 2008). The Dutch replaced the Portuguese as the dominant force, and the VOC controlled the trade in Indonesia with military and naval defences: a fleet of 200 ships and an army comprised of 30,000. The Dutch remained in power in the Maluku Islands from the 17th to the middle of the twentieth century.

The Dutch pioneered the colonial practice of extracting from the indigenous peoples through the system of forced deliveries, quotas, and labour taxes (Brockway, 1979). The company operated much like a modern-day multinational corporation although fully funded by the Dutch government. Trading posts and settlements were set up in Japan, present-day India, Taiwan and Sri Lanka.

Towards the end of the 17th and over the course of the 18th centuries the Dutch expanded their reach to the Americas and Africa. In Africa the VOC captured and controlled the Cape Colony in Southern Africa, centered on the Cape of

² Jan Pieterzoon Coen's leadership of the VOC and conquest of the region led to the horrific Banda Massacre of 1621 during the rise of Banda Islands resistance. An estimated 14,000 Bandanese were killed in the massacre and many were enslaved or forcefully deported. During the Black Lives Matter Movement summer demonstrations of 2020, protesters called for the removal of Coen's statue from the city center of Hoorn, Nord Holland. Protesters criticized the heroic depiction of Coen that omitted violent histories and actions which led to genocide of the Bandanese people. The statue of Coen still remains and has not been moved to a museum as suggested by protesters.

Good Hope (in present-day South Africa) and along the West African coast trading posts were built (Poddar, Patke and Jensen, 2008). In the Americas, the Dutch established their western counterpart of the VOC, the Dutch West India Company, also known as Geoctrooieerde Westindische Compagnie (GWC). In South America, they were in parts of Brazil, the Antilles – present day Suriname and the islands of Aruba, Curaçao and Bonaire, and half of Sint-Maarten (Saint-Martin). The GWC called these colonies the “Dutch West Indies.”



Scene Showing the Taking of Cotchin in Mallabar by the VOC.

1.2 Trade of Exotic Plants, Spices and Other Raw Resources

The multifaceted relationship between colonialism and botanical science began with the trade and exploitation of *exotic* plants as commodities. The Dutch established their presence in Asia through stronghold trading posts strategically built around the spice trade route. They primarily traded with the local indigenous groups at first, however with the increased demands in Europe the VOC

sought methods to increase production to meet the market's demand.

The VOC maintained control of the Indonesian colonies exporting cloves, nutmeg, mace which were native to Banda Islands, a part of the Maluku Islands which were integral for the empire because “spices were objects of ancient desire” (Spencer and Cross, 2017). These spices were the ideal cargo as they were easy to transport between harvesting location and the market. Dried goods created little to no risk of deterioration during transporting shipments.



A Battle Scene between the Dutch East India Company and the Residence of the Indonesian Town of Palembang.

The Dutch established trade and a favorable relationship with China through a station on Formosa, present day Taiwan. The Dutch purchased cheap opium from India through the British East India Company and sold it marked-up in Java to merchants for distribution (Musgrave and Musgrave, 2000). In exchange, China supplied the Dutch and the rest of the European empires with tea. China had a tight grip and monopoly on tea due to only exporting dry tea leaves and not

allowing traders access to their plantations and agricultural methods. By the 17th century tea increased in popularity as a new beverage in Europe.

While on the other side of the globe, the Dutch optimized the exploits of each captured region for maximum profits. In South America, the Dutch established settlements that would become cash crop plantations for their empire. All the European empires guarded their natural resources and regarded the resources as “green gold” (Schiebinger, 2004) going as far as engaging in secrecy, bio-espionage, and piracy to keep their monopolies.

1.3 Plantations in the New Worlds

Colonial empires became increasingly exploitive as new methods were developed under the ‘Plantation System.’ This method was to create not only agricultural colonies but also an industrial enterprise. The plantation system was the mass cultivation and production of monocultural cash crops with financially lucrative plants such as tobacco, coffee, tea, sugar, and indigo. This was based on the labour of enslaved peoples from Africa and from indentured labourers from China, India, and Indonesia (Poddar, Patke and Jensen, 2008). At an unprecedented scale, European empires including the Dutch created extractive economies using this system.

In Jill H. Casid’s *Sowing Empire: Landscape and Colonization*, the author describes ‘plantation’ and ‘transplantation’ as products of imperial power. Casid (2005) explains, “ideologically and discursively, *plantation* was often used as a synonym for *colony*” and continued with:

Plantation and colony were interchangeable precisely because effective colonization with “justification” depended on disindigenating, transplanting, and relandscaping the [‘West Indies’] such that the land was made empty and then (re)possessed by its ostentatious cultivation, its agriculture. Not only were the main cash crops of the plantation system – sugarcane, coffee, and indigo – transplants, but plant

transfers to the Caribbean from Europe, Asia, Africa, and the South Pacific so radically transformed the landscapes of the Caribbean Islands that those species of flora most symbolically associated with the “tropics” were precisely those plants by which the British grafted one idea of island paradise onto another (2005, p.7).

The GWC established plantations in the Antilles for coffee, sugar, and cotton maintained by enslaved peoples. Dutch merchants on Curaçao sold and traded enslaved peoples from Africa to the Spanish and British to work on plantations (Poddar, Patke and Jensen, 2008). The Dutch shipped cash crops to Ceylon, now present-day Sri Lanka, and to the Indonesian Archipelago to create plantations.

To maintain the control of their monopolies, European empires required quinine to keep their armies and plantation authorities healthy. The success of the empires depended on keeping the colonies alive. Cinchona trees were used to produce quinine medicine for malaria. Cinchona tree or Peruvian bark, also known as *quinquina* in the Quechua language originated from the Eastern Andes. The Incas and other Andean indigenous herbalists kept the medicinal knowledge of *quinquina* as a treatment for fevers from the Spanish when they arrived in South America (circa 1532) for over a hundred and thirty years (Schiebinger, 2004). Not until mid-1600’s did the Spanish learn of *quinquina*’s medicinal properties. *Quinquina* grew primarily in high montane forests of Peru, Ecuador, Bolivia, and Colombia; when the Andean republics gain independence, they were premier growers.

By the 19th century a malaria epidemic rapidly spread through colonies on the Asian and African continents; the demand for *quinquina* grew in tropical climates where there was European presence. Europeans were unsatisfied with indigenous growers’ harvesting methods,³ unbeknownst to them that the practice was sustainable (Brockway, 1979).

³ The trees were cut down before the bark was stripped, the bark-less trunks would decompose, and the roots would grow new shoots for new trees that would be ready for harvest within six years.

British and Dutch botanists under the command of their governments smuggled seeds out of South America to grow on their own plantations which led to the native economy losing their industries of quinine production to the transfer to Asia (Ibid., 1979).

In fact, on the island of Java, the VOC established plantations growing opium poppies and cinchonas trees. The Dutch botanists at the Buitenzorg Gardens experimented with hybridizing and grafting species of cinchonas to cultivate new strains for higher harvest (Ibid., 1979). These species of cinchonas yielded much greater quantities than achieved by any other empire. The Dutch replaced the Andeans' industries and overtook the monopoly on quinine which continued well into the twentieth century. Ninety seven percent of the world's market of quinine was supplied by the Dutch until the Second World War (Musgrave and Musgrave, 2000). Although quinine was produced in South America, Asia, and later Africa, most of the local population could not afford the drug (Brockway, 1979) and the Europeans stockpiled for Europe and their colony plantations.



The Gathering and Drying of Cinchona Bark in a Peruvian Forest,
Wood Engraving.

Java was turned into an enormous plantation system growing cash crops and spices all for the European markets (Poddar, Patke and Jensen, 2008). The Dutch controlled Indonesia “like a model colony” (Ibid., 2008) through what they called the *Cultuurstelsel* (Cultivation System). This system was dependent on the exploitation of farmers obligated to grow for the VOC and provide compulsory labour on company plantations.

1.4 Early Botany and Horticulture

Botany is the scientific study of plants and horticulture is the science and practice of cultivating plants. Botany emerged as a science alongside the expansion of European empires in the colonial settings. Before botanical science was established as a discipline within European scientific society – a small group of homogenous scientific elite (Brockway, 1979), it was a branch of ‘natural history.’ Naturalists were interested in understanding all forms of life on Earth and applied order to nature through imposing colonial systems of categorization.

Botanical knowledge within Indigenous cultures existed long before Europeans claimed ownership of it and applied their “grid of reason” over nature (Schielbinger, 2004). David Mackay (as cited in Schielbinger, 2004) argued that botanists of this time “were ‘*agents of empire*’: their inventories, classifications, and transplantations were the vanguard and, in some cases, the ‘*instruments*’ of European order” (emphasis added).

Many of the leading European naturalists of the 18th century were “armchair botanist” as Schielbinger (2004) explained; most never left Europe to conduct research. They relied on large-scale colonial trade networks and sent students with specific instructions which allowed them to observe at a distance. Student naturalists and botanists accompanied expeditions to collect, record, and preserve specimens of

flora and fauna. Wealthy amateur botanists would also accompany voyages for the collectors' market back in Europe. Both student and amateur botanists' missions were to identify and successfully commercialize profitable natural commodities.

European botanists of the 18th century have had a greater impact on a global scale than we perceive. For example, Joseph Banks, an English botanist and wealthy landowner 'discovered' breadfruit, *Artocarpus altilis* a nutrient-rich fruit on the Polynesian Island of Tahiti in 1769. He was aboard the HMS *Endeavor* with Captain James Cook on an exploratory voyage in the Pacific Ocean. Upon Banks' return to England, he proposed a plan to King George III to "set out on a mission to collect breadfruit from Tahiti for transportation to the West Indies to alleviate the problem of feeding the [enslaved] population there" (Bruce, 1993). This was the mission that the now infamous mutiny on the HMS *Bounty* with Captain William Bligh failed to complete.

Bligh eventually succeed in his second attempt to bring breadfruit to Jamaica. However, "at first it seemed as though transplanting the breadfruit to the West Indies had not been a success as the [enslaved people] were slow in acquiring a taste for it, but it has long since become an integral part of the West Indian diet" (David, 1993) and now, present-day breadfruit has become a staple food in tropical regions. It was Banks, the English botanist who had made this happen.



Breadfruit (*Artocarpus Altilis*): Fruiting Branch.

CHAPTER 2

A Plenitude of Being

This chapter I explore and analyse botanical taxonomy and terms affiliated with botanical landscapes. I attempt to understand and challenge the categorical ramifications within social and cultural contexts. The chapter is divided into two parts. The first examines the categories of belonging in relation to the landscape: alien, non-native, native, naturalised and invasive. The second part connects colonial histories with contemporary relationships with nature. I will address and respond to few issues that still remain. Meanwhile, I attempt to discover pathways towards decolonial botanical practices and thinking, which expands into the project overview in Chapter 3.

2.0 Categorisation of Plants on a Landscape

This chapter takes its name from Michel Foucault's *The Order of Things* (1966, 2005), a text that analysed the history of scientific knowledge and ways of thinking to rationalise what is "truth." Foucault proposed that in western culture there are three episteme periods – the system of knowledge – that evolved over history (Ibid.). Foucault focused on the origins of human sciences and comparatively presented biology, linguistics, political economy and philosophy. The early origins of biology and classifying through taxonomy was called *natural history*.

In his preface, Foucault explained his inspiration for the text was through Jorge Luis Borges' short story, '*The Analytical Language of John Wilkins*' from *Other Inquisitions, 1937 – 1952*⁵. According to Borges, "obviously there is no classification of the universe that is not arbitrary and conjectural. The reason is simple: we do not know what the universe is" (Borges, 1964). The short story featured a list of absurd 'taxonomical' attributes that reiterates Foucault's

⁵ See Appendix.

idea of system of criteria references, even if arbitrary creates rational value (1966, 2005).

In 1735, the Swedish scholar and botanist Carl Linnaeus invented the binomial system of classification. In this hierarchical ranking system, organisms, plants and animals are given a two-part name and grouped into categories (a genus and epithet). Linnaeus created the system during a time when Western imperial botanists were collecting plant descriptions, engravings, and specimens from the southern and eastern colonies. The massive amount of information collected needed a way to be managed and ordered to reduce multiple names for the same thing. This helped in exchange and circulation of information between the colonies and metropolises. Linnaeus is considered the “father of modern taxonomy” and due to its simplicity, this system has become universally used in the field of biology.

Traces of colonial history exist in the everyday; in the plants and animals that surround us. Within the field of biology and international governmental laws plants are placed within one of four categories: ‘alien,’ ‘native,’ ‘non-native’ or ‘naturalised.’ For example, the European Commission releases a yearly brochure titled *Invasive Alien Species of Union Concern*⁶ for both plants and animals.

The publication gives brief summaries in “non-technical language” and states the restrictions and obligations in place to mitigate the aliens’ impact on native species. International laws such as custom declarations restrict seeds, plants, fruit, vegetables, or anything that can allow non-native organisms to enter the Netherlands. Then there are additional import and export trade laws for prevention. I first reviewed the *List of Invasive Alien Species of Union Concern* in September 2019 during my initial research into invasive plants. Every few months I come back to the list and see new entries added to the growing list. This chapter presents the argument that names and categories given by the colonial system of science perpetuates biases and cultural divide beyond plant and animal beings.

⁶ Available at: <https://op.europa.eu/en/publication-detail/-/publication/047cee1a-077b-11eb-a511-01aa75ed71a1>

2.1 The Alien and “The Others”

“What’s in a name? that which we call a rose,
By any other name would smell as sweet”

– Shakespeare, *Romeo and Juliet*

What is an ‘alien’? What is considered ‘alien’?

The etymology of the word alien in Middle French *aliene* is “of foreign country”⁸ and in Old French to mean “strange, unfamiliar”. Not much has changed for the current definition of the word as noun: “belonging to another person, place, or family; not of one’s own; from elsewhere, foreign.” Similarly, as a verb: “to make averse, hostile, or unsympathetic to someone or something; to alienate, estrange.”⁹

An early science fiction novel and among the first to feature an alien encounter is H. G. Wells’, *The War of the Worlds* published in 1898. Contemporary interpretations of Wells’ novel are believed to be a commentary on the British Empire’s violent encounters with other civilizations. According to Bernard Bergonzi’s *The Early H.G. Wells: A Study of the Scientific Romances*, Wells stated in an article the novel’s inspiration stemmed from a conversation with his brother: “[p]erhaps we had been talking of the discovery of Tasmania by the Europeans—a very frightful disaster for the native Tasmanians” (Wells quoted by Bergonzi, 1961, p.124). In this novel, the British (though we could also substitute any other western empire) are represented by the Martian aliens invading with their advance technology to conduct merciless genocide in other worlds.

This narrative of invade and conquer has been embedded in the conventions of western expansion since the beginning of the western invention of time (Sardar, 2002). As speculative as fiction can be, it is not without some truths. Ziauddin Sardar examines this in his introduction to *Aliens R Us* saying “[t]he ‘science offered by science fiction is populist

⁸ Oxford English Dictionary.

⁹ Oxford English Dictionary.

dissection of the psyche of Western civilisation, its history, preoccupations and project of future domination – past, present, and future” (2002). Sardar continues with:

Aliens demonstrate what is not human the better to exemplify that which is human. Difference and otherness are the essence of aliens, for only then can they stiffen the sense of self and self-defence that completes the chain of science fiction as normative genre. Coming full circle, aliens are often devils’ incarnate, ready and willing to offer the Faustian bargain. Across space and time science fiction materialises the constellations of ideas and narrative tradition that personify and are distinctive of Western civilisation (2002, p.6).

Pop culture perpetuates this idea, portraying the alien as mysterious, terrifying beings, and often monstrous, not belonging, as “The Other”¹⁰ and not *The Same*.

The alien is *The Other*.

The Other defined in anthropology and philosophy, is based on the notion of perceived differences, intrinsically distinct from the western tradition (Sarukkai, 1997). Often perceived as not belonging, lesser or inferior and treated as such; denoting a subordinate to the west in order to control *the Other*, or the alien. This further complicates this term when used to categorize people and non-human beings. *The Other* is non-Western, outside the narrow boundaries of Eurocentric perspectives. Fear of the unknown is the oldest human fear. Each ancient civilization had their own mythologies to explain natural phenomena for the unknown. Human desire to understand the world and nature comes from this discomfort of not knowing. The unknown is not always knowable.

For Sara Ahmed, not all encounters are met with such misunderstandings. In Ahmed’s *Strange Encounters: Embodied Others in Post-Coloniality* (2000), “the alien

¹⁰ From this point onwards I will refer to this term in italics instead of quotations.

recuperates all that is beyond the human into the singularity of a given form” and the fantasy of the alien is from a western cultural imagination (Ibid.). According to Ahmed, “[t]he alien is hence only a category within a given community of citizens or subjects: as the outsider inside, the alien takes on a spatial function, establishing relations of proximity and distance within the home(land). Aliens allow the demarcation of spaces of belonging: by coming too close to home, they establish the very necessity of policing the borders of knowable and inhabitable terrains” (Ibid.). *The Other* is redefined and re-envisioned as the stranger rather than outsider. In this redefinition, the other, now the stranger, has a new relationship with the non-other/non-stranger whomever that is (Ibid.). A stranger is one you have yet to know. The stranger has an opportunity to become a non-stranger. The stranger is unfamiliar however with patience can be known.

2.1.1 What is ‘native’? What is ‘non-native’?

“Definition of the prefix *Exo* in the most general sense possible. Everything that lies “outside” the sum total of our current, conscious everyday events, everything that does not belong to our usual “Mental Tonality.”

– Victor Segalen, *Essay of Exoticism: An Aesthetics of Diversity*

Within the botanical, to know what is alien and other, we might have to look at what is ‘native’ and ‘non-native’. There is a relationship between the two, alien and non-native that is inseparable, as it is only in relation to each other that they can be fully understood. ‘Non-native’ exotic plant species can be defined as “one that is foreign to an ecological assemblage. In contrast to a native species, an exotic species is one that has not significantly adapted to resident biota or to local abiotic conditions, and – perhaps more importantly – resident species have not significantly adapted to it” (Hettinger, 2001). A ‘native’ plant in one locale would be ‘non-native’ in another region, and a ‘non-native’ tree would be ‘native’ in its origin environment. ‘Native’ and ‘non-native’

become interchangeable and relative to geography.

Within the geographical context of where this text is written, 'native' refers to the South Holland region in The Netherlands, and Northwestern Europe in a more general description. 'Native' here is European, the western world. This concept of 'native' plants used in botany was first outlined in 1835 by English botanist John Henslow and later adapted to determine 'true' British native species from the alien plants (Davis, 2011). A native versus alien dichotomy has existed since the 19th century. Davis identified that "biodiversity preservation and ecological restoration commonly used *military metaphors* and exaggerated claims of impending harm to help convey the message that introduced species are the enemies of man and nature" (2011, emphasis added), however Davis added that such unfounded claims have not been backed by scientific data. 'Non-native' plants add to biodiversity. In regions where both a 'native' and 'non-native' species of a genus exists, they can be almost identical and common to misidentify which belongs in the ecosystem.

As mentioned in Chapter 1, expeditions from Western European empires on imperial missions of expansion searched for plants and animals of the *terra incognita* (lands unknown). The further the distances, from the tropics, the desert, or lands with climates dissimilar to the temperate western world, the more foreign the geology and ecology; the more *exotic*. The concept of *exotic* comes from a European perspective, a fetishization of the exotic created by the stereotyping and glamorisation, yet also vilification of *the other*. The non-native exotic becomes a form of stranger fetishism (Ahmed, 2000). Exotic species were brought back to European metropolises and introduced purposely and intentionally, which confirms that "cultures have always been inclined to impose complete transformations on other cultures, receiving these other cultures not as they are but as, for the benefit of the receiver, they ought to be" (Said, 1978). Exotic plants were introduced to the European landscape as ornamental and agricultural commodities – i.e., plantations of Chapter 1.3, contained within the confines of herbariums, gardens, and farms.

2.1.2 What is 'invasive'?

The root of the word 'invasive' is 'invade,' 'invasion.' The etymology of the word 'invade' goes back to early 16th century medieval Latin *invādēre*, prefix in- and *vādēre* to go, walk and defined as “to enter in a hostile manner, or with armed force.”¹¹ Throughout western history there have been countless invasions for lands, starting on the European continent, then spreading outwards through coloniality. The West have been invading under Christendom for millennia. Plant species too can colonize a new land if given the optimal environment for multiplying.

The stages of invasion are recognised as the following: 'exotic,' 'established,' 'naturalised' then 'invasive.' Exotic plant species arrive due to intentional or accidental introduction as a result of human activities. Once exotic plants are established where they “occur outside of the confines of cultivation”, i.e., 'in the wild' and they can stay in this 'lag phase' for a considerable amount of time “in which the species adapts to its new environment using its genetic flexibility” (van der Burg et al. 2012). The next stage occurs as naturalised species when enough time has passed that the plant species start to genetically adapt “by optimising its physiology and/or growth habit” (Ibid., 2012) and flourish in the new environment becoming part of the natural ecosystem. When the species start spreading rapidly effecting the indigenous native biodiversity causing environmental, ecological, or economic impact it is considered invasive.

'Invasion biology' as a discipline wasn't established until the 1990s. Invasive plants are not a singular phenomenon that occur only in this European landscape. Much of Earth has invasive plants or animals from another part of the globe. One way to quantify the scale of imperialism is to look at the extensive list of invasive alien plants in each country or continent.

¹¹ Oxford English Dictionary.

With weeds species, they are not necessarily always alien species, some are even native. However, they have adversely impacted the ecosystem through multiplying and growing aggressively out of control, similar to alien species. Words to describe weeds are comparable to alien plants such as noxious weeds, pest, nuance, etc.

When I think of invasive, I think of Himalayan Blackberry, *Rubus armeniacus* Focke. My own encounter with invasive plant species goes back almost two decades. In Vancouver, on the unceded territories of the xʷməθkwəy̓əm (Musqueam), Skwxwú7mesh (Squamish) and Səlilwətaʔ/Selilwitulh (Tsleil-Waututh) Nations, and where I grew up as an immigrant settler, the blackberries species grow furiously fast and have established itself along the west coast of North America. The Himalayan blackberry come from the Caucasus region of Eurasia (Caplan and Yeakley, 2006) and was previously believed to be native to Central Europe, named *Rubus discolor*, *R. procerus* or *R. fruticosus*. It was introduced to North America for cultivation in the late 1800s by European colonialists (Caplan and Yeakley, 2006). The plant's stems which are also called canes tangle and strangle other surrounding vegetation with its six meter long (approximately 20 feet) stems, bushes grow up to four meters tall (13 feet) and the root system extend up to ten meters (approximately 33 feet).

As a teenager, I volunteered twice a year to trim bushes and dig out roots as part of city initiatives for Himalayan blackberry management in the local ravine. In between cutting up the bushes, the volunteers would snack on the sweet berries. The neglected ravine was a dump site for rusted appliances, plastics bottles, and the blackberries growth engulfed the ravine's waterway preventing stream flow. Some of the local neighbours were against the removal of the bushes due to the food source it created for the ravine wildlife which contributed to the dispersing of seed, while others urged for the eradication of the Himalayan blackberries from the ravine for it to return to its 'natural state.' In order to eradicate the blackberry bushes more harm could be done to the site, for example removing root systems that would loosen the soil and cause landslides. Over the years as the blackberry bushes have reduced in size and

capacity; the ravine ‘revived’ however Himalayan blackberries still continue to spread rampantly by birds and other animals that eat the berries.

2.2 Entanglement

During the Slow Waves, Small Projects residency mentioned in the preface, I was recommended a fantastic reading list and among the works by indigenous scholars, writers and poets was Robin Wall Kimmerer’s *Braiding Sweetgrass* (2013). Not only is Kimmerer a compelling writer, but she is also a biologist, botanist, and ecologist. As a member of the Citizen Potawatomi Nation and a scientist, Kimmerer combined indigenous wisdom with scientific knowledge to offer perspectives beyond traditional western science.

Plants and animals have two names: a binomial nomenclature and a common name. Outside of scientific circles, only the common name is used. A recent phenomenon called “plant blindness” (Jose and Kamoun, 2019) is described when humans ignore or are not aware of the plants in their surroundings. Kimmerer suggests in that learning plant names – their multiple common names, and Indigenous names is towards learning about what they can give and what knowledge they have to offer (2013). She notes that in indigenous ways of thinking, plants are understood as beings and not objects; and are regarded as persons (2013). Kimmerer explains why she capitalized common names for plants and how this treatment of plants is to recognize plants as beings, as teachers; and removes human exceptionalism and hierarchy. Some common names are translations of the taxonomic name while others have vernacular names specific to regions. The different names give insight to the kind of relationship the plant have with their biological or anthropogenic environments. Some species fit the description of their namesake or indicate their origins. Learning their names, learning their gifts leads to reciprocity (Kimmerer, 2013). Part of our job is to learn how to learn. Knowing leads to understanding.

2.2.1 Colonial Methods of Naming

The binomial system of naming uses Latin – a language primarily used only by elite upper and middle class men with classical western education – which in 16th century was considered ‘universal.’ The term universal, as used here, meant for European men. It served the colonial botanists, naturalist and scholars to communicate with one another, but excluded locals from the dialogue and scholarship. As plants were ‘discovered’ credit was given to European botanists and they determined the genus classification and named species after themselves or to honour aristocrats.

The local and indigenous names of flora and fauna that existed long before colonial botanists arrived were ignored or appropriated, and now some are forever lost. This naming method of erasure is still practiced today. Linnaeus had strict rules for nomenclature and created new Latin names for plants however he “retain[ed] a number of well-established “barbarous” names. These, it should be emphasized, were used only if the word was short, attractive when Latinized, and not difficult for a European speaker” (Schiebinger, 2004, quotations in original). The non-italic capital ‘L.’ at the end of the binomial name is an abbreviation for Linnaeus and he is credited for naming thousands of species, yet he was never present in the ‘discovery’ of the plants; he examined specimens back in Sweden.

In the last few centuries flora and fauna species continue to be ‘discovered’ and scientific research stubbornly persisted and conducted under colonial methods. In a study published in 2020, three scientists analysed data of naming practices in biology between 1950 - 2019 and their research revealed the following. The majority of published papers in this field were authored by global north yet the research was conducted substantially in the global south. Plants and animals “species from formerly or currently colonized parts of the world [...] come to be described by, and named after, scientists from former or current imperial metropolises” (DuBay, Palmer, and Piland, 2020). Unnamed and unrecognised local and indigenous knowledge are primary sources that inform the

research therefore must be transparent. To decolonise science, this practice needs to be addressed.

2.2.2 Decolonise the Garden

Botanical gardens are gardens “in which plants are cultivated for scientific research, conservation, and display to the public.”¹² They are institutions with hidden colonial layers. Plants are living ghosts of imperial past; within them, through their cultivation and presence, holds histories of both violence and resistance. Plants are seen as *innocent* or neutral because they are natural but nonetheless, they were utilised as tools of power. In recent years there has been a slow shift of cultural institutions addressing their colonial histories and botanical gardens need to engage in this dialogue. One step that botanical gardens can work towards is to acknowledge their colonial legacies. Botanical gardens outside of the metropolises were built for economic botany which destroyed forests and communities, displacing native plants and peoples.

The garden is framed as a site of natural and national heritage. The plants that make up an entire herbarium’s collection came from former colonies and created during colonial occupation. Interwoven in the construction of a botanical garden is botanical migration. The botanical garden was a laboratory for imperial projects to experiment with transplanting and cultivating for plantations. A few institutions have removed and renamed collections named in ‘honour’ of colonialist.

In the Netherlands, the Dutch ecologist Tinde van Andel suggests that to “open the treasure room” is a method to decolonise a museum (2017). What van Andel is suggesting is for cultural institutions to open the access to their rare and special collections. Digitalizing the contents of the collections and make the data accessible for research cross-cultural knowing – especially for scientists and scholars from countries that the contents originate. TJ Demos argues that we need to “decolonize our research methodologies, in part by acknowledging the conceptual lineages of theories elaborated in the Western academy and tracing their

¹² Oxford English Dictionary.

connection to the histories of struggles and perspectives of the colonized, including Indigenous cosmologies, subaltern legal codes, and social movements where appropriate. In doing so, we take seriously the critiques of native thinkers themselves” (2016). History cannot be changed but how such history is acknowledged impacts the present and future.

CHAPTER 3

Ut translatio natura (nature as metaphor)

My practice has an underlaying ecological theme relating to land with a focus on a decolonial approach. I was inspired to work with invasive alien plant species to challenge this idea of 'invasive alien.' In Chapter 2 I discussed terminology relating to such classifications of vegetal beings.

My graduate project also titled *Entangled Landscapes* has focused on the representation of nature, place and displacement. The impetus of my thesis project began shortly after my arrival in the Netherlands to begin my masters studies. In a new country, a new landscape I began researching the 'invasive alien' plant species occupying Northwestern Europe.

The research took me out of the studio and into green spaces to attempt to make sense of these terms. As a result, I began to focus on two plants: Japanese Knotweed and Tulip. The research in these two plants revealed a rich and complex history often left out of their modern narratives. The following case studies are of two plants from the complete opposite spectrum of categories.

3.1 Case Study 1 – Japanese Knotweed, *Reynoutria Japonica*

The common name for *reynoutria japonica* is Japanese knotweed, and plant species originating from Asia, in Japan, China, Taiwan, and Korea. It belongs to the genus Polygonaceae, the same family as rhubarb, sorrel, sea grapes, and buckwheat. The Japanese common name for the plant is 'itadori' which translate to 'take away pain.'¹³

Japanese knotweed was introduced to the Netherlands as an ornamental garden plant in the 19th century by Philipp Franz

¹³ Available at: <https://www.cabi.org/isc/datasheet/23875>.

von Siebold, a doctor that had travelled to Japan in 1823. The plant was housed in the Hortus Botanicus Leiden until it spread throughout the Netherlands and then to the rest of Europe. In the 1950s knotweed began to spread more rapidly and thus became a concern. In the Netherlands and much of Europe, Japanese knotweed and others in the knotweed family have become one of the top “invasive alien” plant species.

According to the European Commission the presence of knotweed has displaced “native” plant species. Due to the species’ strong stems and root system, it can cause damage to buildings, pipes, and roads. Public perception has made knotweed the number one enemy of homeowners with internet articles rumouring knotweed as being able to penetrate through concrete and building foundations (Pavoni, et al., 2018). Although it appears to have the ability to grow through infrastructures, it is in the plant’s resourcefulness and resilience that it is able to find the smallest of cracks in concrete to spread its rhizomes. The prevalent advice from the European Commission is to *eradicate* the plant.

Knotweed often thrives in locations that could be considered wastelands in urban post-industrial cities. Found in sites such as dumpsites, landfills, roadsides, train tracks, construction sites, next to highways and underpasses, and industrial areas with factories, warehouses and ports – the spread of knotweed appears in such sites nationwide. What kind of harm can the plant impose in such liminal locations? In the Netherlands, green spaces are manicured and maintained with precision. Any plant that is deemed unattractive for the landscape gets removed. Knotweed appears in grey zones containing heavy metals that are rich in minerals such as lead, copper, iron, nickel, and sulphur (Ibid., 2018). These chemical-rich soils are similar to the plant’s original volcanic landscape. It revitalises soil by growing in contaminated dirt and volcanic ash.

In Japan, knotweed is far from being a pest. It has grown in volcanic soil on mountainous regions in Japan for centuries. Japanese knotweed shoots are edible with an extremely sour rhubarb-like flavour. Villages around Seki, Gifu Prefecture foraged and used knotweed as an ingredient in dishes and

teas. The roots are used in traditional medicine in China to treat inflammation, pain relief and bronchitis (Hao, D., et al., 2012). It is considered herbal and medicinal in Japan, China, and South Korea.



Polygonum cuspidatum Siebold & Zucc.

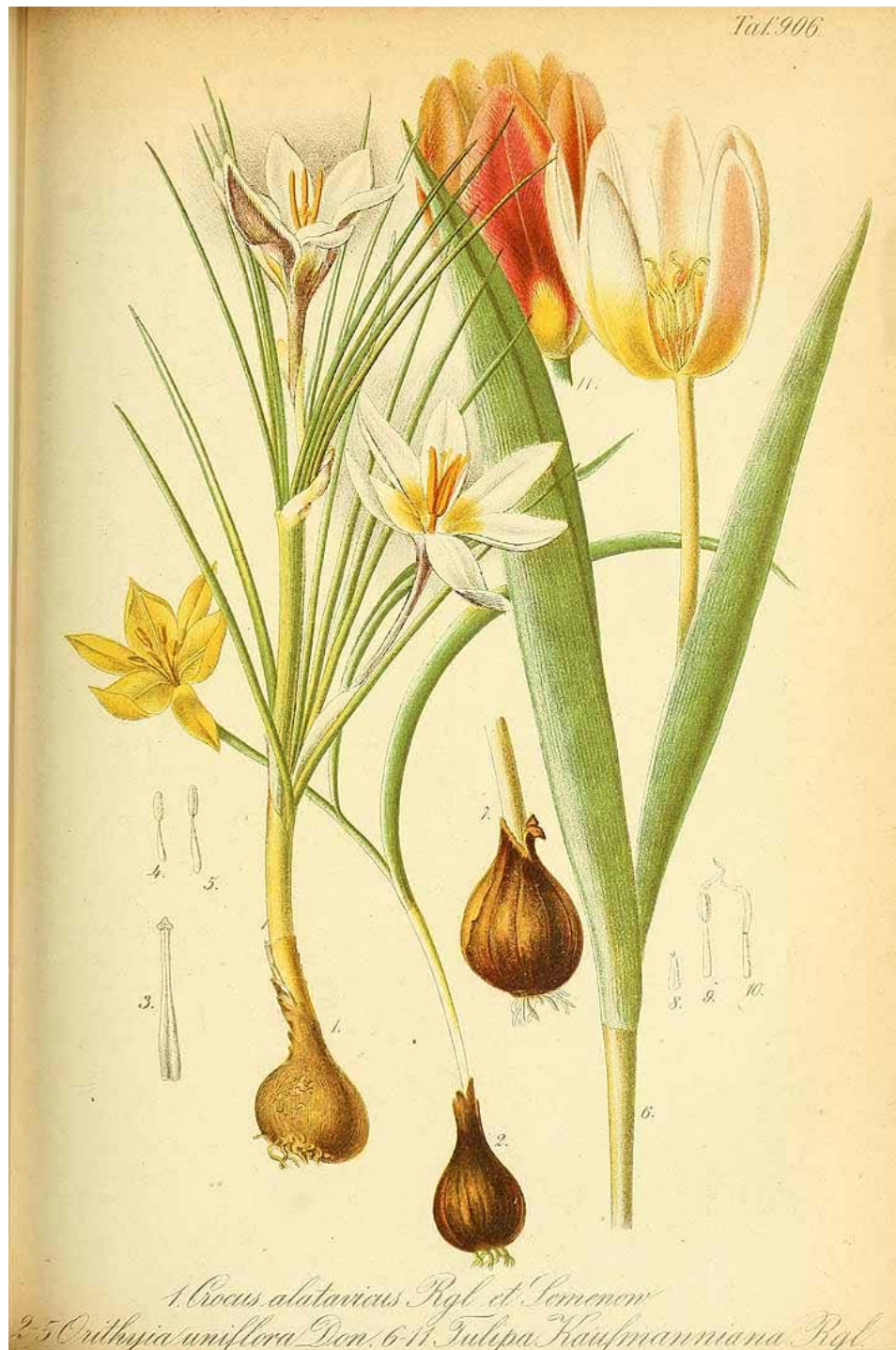
3.2 Case Study 2 – Tulips, *Tulipa*

Every year in early spring tulips (*Tulipa* L.) pop up from the ground across all the flower farms of the Netherlands. Tulip enthusiasts wait in anticipation for the flowers to bloom. Tourist flock to the fields to have a glimpse of tulips in full bloom during the short few weeks window of the blooming period. Before tulips appeared on keychains and postcards in the city centre of Amsterdam recognised worldwide as the national flower of the Netherlands, they were celebrated in present day Turkey and Iran. The Dutch are now the main growers of tulips and exporters of tulip bulbs.¹⁴

Tulips are not native to the Netherlands, in fact, “[i]n the wild, it is an Eastern flower, growing along a corridor which stretches either side of the line of latitude 40 degrees north” (Pavord, 1999). This corridor includes Turkey, Iran, Armenia, Azerbaijan, Turkmenistan, Uzbekistan, and Kyrgyzstan. The *Tulipa* genus contains over a 100 species and cultivars from 15 species hybridizations. Tulips originated from the mountain ranges with temperate climates, not below sea-level in the wetlands of the Netherlands. As the symbol of the Netherlands, tulips have generated and continue to produce an incredibly profitable market. The Dutch are responsible for the cultivation, production and dissemination of tulips and their enterprise goes back to the 17th century.

The bulbs were brought to Vienna by merchants then back to Leiden for cultivation by the Flemish physician-botanist Charles de l'Écluse, more famously known as Carolus Clusius (1526-1609). Clusius worked in Hortus Medicus of Emperor Maximilian, an imperial medicinal garden in Vienna and at the Hortus Botanicus Leiden which was established in 1587 as one of the earliest modern botanical gardens. Clusius was responsible for the so-called *tulipomania*, the craze that popularized tulips as ornamental flowers for gardens which began in Holland then to the rest of Europe (Ibid., 1999).

¹⁴ In 2020, an estimate of 400 million flowers and 140 million tulip stems were grown and destroyed due to COVID-19. Available at: <https://www.nytimes.com/2020/04/12/world/europe/netherlands-tulips-coronavirus.html>



Tulipa uniflora.

Tulip fever raised prices for bulbs to astronomical heights and the flowers were the “ultimate status symbol” (Ibid., 1999). ‘Broken’ or bi-coloured tulip species which were the result of a virus infection were commonly requested (Ibid., 1999). Clusius collected and cultivated the highly desired

species of tulips during his time in Leiden. Dutch growers were the best at tulip production and marketing in Europe. The word tulip comes from a misinterpretation of a translation. The Turkish word for tulip is *lale*, derived from Persian, however the word turban, *tulband* was used to describe the shape of the flower and mistaken for the name of the flower (Ibid., 1999). The flower was prevalent in the Ottoman Empire culture and gardens long before its arrival to Europe. Tulip species were admired by Persian poets as early as the 13th century. Tulips were among the most valued flowers in culture and the word *lale* “was written with the same Arabic letters as were used for the name of Allah, so the flower was often used as a religious symbol” (Ibid., 1999). Tulips were prominently featured as ornamental motifs used in ceramics tiles and pottery. Tiles were employed in architectural designs that covered entire walls in buildings which included palaces and mosques. In Turkey, where they are ‘native,’ the tulip is the national flower.

If tulips are “non-native” to the Netherlands, are they considered “aliens”? Its status as once an exotic species turned national symbol, beloved flower, and identity of the Netherlands is perhaps due to its cultivation and profitability. Its naturalisation process ecologically may have taken a few centuries however culturally it was quickly embraced when it first arrived in Europe in the 16th century. *Tulipa* is one of few genus classifications that Linnaeus kept the name of.

3.3 Methodology

This upcoming section is a brief overview and reflection of my graduate project and methodologies I explored. The project had two elements that informed each other: photography and ink-making. In the darkroom or in the studio, they are both slow, meditative activities and forms of alchemy. The research I have presented in Chapter 2 manifests through the plant selection and integration of organic material in my image-making. The result of combining photos of one plant and ink-making from an opposing category, for example, knotweed and tulips to “intermix” (Casid, 2003). The aim of this project is to create

images to explore the idea of entanglement of botanical beings and produce hybrid images – a visual bouquet.

Expanding on my past research in non-toxic organic photochemistry, I utilised organic plant matter to create pigments. I primarily worked with *living* plants therefore the processes were time sensitive. The ink-making research led me to the craft of natural dying which I adapted from existing recipes. For the images, I emulated a portraiture style. ‘Native’ European plants that are weeds or invasive elsewhere (dandelion and stinging nettle) were also used for ink-making.



Japanese Knotweed ink pigment mixed with acrylic paint on image of tulips.



Dandelion ink over image of hogweed ('non-native' and 'invasive' plant).

3.4 Conclusion

Learning from plants requires more than just observation, it needs a sense of kinship with non-human beings or as Donna J. Haraway suggests making kin and “stay with the trouble of living and dying together on a damaged earth” (2016).

After reading Kimmerer’s work I have reflected on how learning leads to reciprocity and deeper understandings. Acknowledging the land and its history is how I intend to learn. I have asked myself how can I work towards decolonising as an uninvited guest and settler? How does one document a place without taking a photograph? How to decolonise the natural world and what that could look like?

This thesis is an accumulation of the research that informed my graduation project. Throughout this process I was fascinated by plant narratives as they could be metaphors for complex social issues such as migration and climate change. In particular, my intention for both the thesis and project is to reflection on the idea of intertwinement of human and non-human botanical beings. The plant within the image and the plant ink contaminates and influences one and another as such that they become interwoven, layered, entangled. These assemblages make new worlds, new landscapes.

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Appendix

On page 19 in Chapter 2, I mention Foucault's response to Jorge Luis Borges short story. Here is a section of the text where the taxonomical of "redundancies" is listed; from, 'The Analytical Language of John Wilkins' in *Other Inquisitions 1937-1952*:

These ambiguities, redundancies, and deficiencies recall those attributed by Dr. Franz Kuhn to a certain Chinese encyclopedia called the *Heavenly Emporium of Benevolent Knowledge*. In its distant pages it is written that animals are divided into (a) those that belong to the emperor; (b) embalmed ones; (c) those that are trained; (d) suckling pigs; (e) mermaids; (f) fabulous ones; (g) stray dogs; (h) those that are included in this classification; (i) those that tremble as if they were mad; (j) innumerable ones; (k) those drawn with a very fine camel's-hair brush; (l) etcetera; (m) those that have just broken the flower vase; (n) those that at a distance resemble flies (1964, p.126).

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